TECHNICAL WORK MAY NOT BEGIN PRIOR TO CO APPROVAL

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

CONTRACTOR	CONTRACT NO./TASK NO.	JOB ORDER NUMBER	APPROP. FY
QSS Group, Inc.	NAS5- 99124 TASK NO. 5 AMENDMENT	563-839-30-45-89	98

TASK TITLE: (NTE 80 characters; include Project name)

Evaluation of Li-Ion Cells for NANOSAT

APPROVALS: (Type or print name and sign)

	DATE	ORG CODE	MAIL CODE	PHONE
ASSISTANT TECHNICAL REPRESENTATIVE (OR TASK MONITOR) Gopal Rao	4/9/99	563	563	301-286-6654
Marlon Enciso for Thomas Y.	4/9/99	CODE 563		PHONE 301-286-5845
CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) Fred Huegel Deborah A. Clark	4/14/99	CODE 568		PHONE 301-286-2285

FLIGHT HARDWARE, CRITICAL GSE OR SOFTWARE? *(IF YES, NEED CODE 303 CONCURRENCE NEXT BLOCK)*	CONTRACTING OFFICER'S QUALITY REP.	DESIGNATED FAM:
[X] NO [ ] YES	Larry Moore	

The contractor shall identify and explain the reason for any deviations, exceptions, or conditional assumptions taken with respect to this Task Order or to any of the technical requirements of the Task Order Statement of Work and related specifications. The contractor shall complete and submit the required Reps and Certs.

(To be completed by Contracting Officer)
C.O. Requested Quote on:
Date: APR 19 1999

Contractor will develop specification or statement of work under this task for a future procurement. [X] NO [ ] YES

Flight hardware will be shipped to GSFC for testing prior to final delivery. [ ] NO [ ] YES [X] N/A

Government Furnished Property/Facilities: [ ] NO [X] YES -- SEE LIST OF GFP (offsite only) / FACILITIES (onsite only)

Onsite Performance: [X] NO [ ] YES If yes: [ ] TOTAL [ ] PARTIAL
If partial, indicate onsite work in SOW by asterisk (*)

Surveillance Plan Attached: [X] NO [ ] YES

Highlighted Contract Clauses: *(to be completed by Contracting Officer)*

INCENTIVE FEE STRUCTURE (check one)

(See Contract NAS5-99124, Attachment K, Incentive Fee Plan)

	_X_ No. 1	___ No. 2	___ No. 3	___ No. 4	___ No. 5
Cost	10%	50%	25%	25%	%
Schedule	15%	25%	25%	50%	%
Technical	75%	25%	50%	25%	%

(To be completed by Contracting Officer)

The target cost of this task order is $_____.
The target fee of this task order is $_____.
The total target cost and target fee of this task order as contemplated by the Incentive Fee clause of this contract is $_____.

The maximum fee is $_____.
The minimum fee is $0.

AUTHORIZED SIGNATURE:

THIS TASK ASSIGNMENT IS ISSUED ACCORDING TO THE CONTRACT CLAUSE "TASK ASSIGNMENTS AND REPORTS"

SIGNATURE OF CONTRACTING OFFICER | DATE | TYPED NAME OF CONTRACTING OFFICER

CONTRACTOR'S ACCEPTANCE:

AUTHORIZED SIGNATURE | DATE

GSFC FORM 703-1845 12/98 (OLDER VERSIONS ARE OBSOLETE)

DISTRIBUTION: CONTRACTOR, CONTRACTING OFFICER, COTR, CODE 303, RESOURCES ANALYST, ASSISTANT TECHNICAL REPRESENTATIVE

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CONTRACTOR	CONTRACT NO./TASK NO.		
	NAS5-	TASK NO.	AMENDMENT
QSS Group, Inc.	99124	5	

Applicable paragraphs from contract Statement of Work: Function 2.D.7

STATEMENT OF WORK: (Continue on blank paper if additional space is required)

The contractor shall provide an uninterrupted transition of the existing testing from the current contractor.

The contractor shall provide services to verify lithium-ion cell performance for the NanoSat Program. The Lithium-Ion Cells to tested are: Five (5) 1.25 Ah and Eight(8) 4 Ah from SAFT, Two (2) 15 Ah and Ten (10) 2 Ah from EPT, Ten (10) 1.5 Ah from Wilson Greatbach, and Ten (10) from Lithium technology.
The contractor shall provide the following services:

Perform initial acceptance test
- Provide cell capacities at 20, 10 and 0 degrees C.
- Perform Charge retention test at 20 degrees C.

After completion of the acceptance testing, present electrical performance data from the initial acceptance test to ATR and /or his representative.
Perform calorimetric study on one (1) cell per each vendor.
Assemble three (3) test cell packs:
- One Pack - Four cells in series
- Two Packs - Two cells in parallel

Perform LEO cycling test at 40 percent Depth-of-Discharge
- One four-cell pack and one two-cell pack at 20 degrees C
- One two cell pack at 30 degrees C
- Test orbit shall be 90 minutes: 60 minutes Charge and 30 minutes discharge
- Clamp the voltage during the charge and provide a minimum 15 minutes trickle charge

The contractor shall submit the calorimetric study report within 21 days of completion of the study to ATR.
The contractor shall notify the ATR of any cell failure within 48 hours of such a failure by email (Gopalakrishn.M.Rao.1@gsfc.nasa.gov) or fax (301-286-1751).
The contractor shall prepare a written corrective action plan after such a failure, and submit it to ATR within 72 hours of the failure.
The contractor shall email or fax a typical orbit data weekly to ATR.
The contractor shall submit a written status report after every thousand orbits.
Upon completion of the cycling test program, the contractor shall submit a written final report to the ATR within 21 days.

PERFORMANCE SPECIFICATIONS:
All plans and testing under this task are to be produced and performed using aerospace test standards and practice.

APPLICABLE DOCUMENTS:
NanoSat Lithium-Ion Test Plan by Gopal Rao, Code 563, GSFC

TASK END DATE: 9/30/99

MILESTONES/DELIVERABLES AND DATES:

Initial Acceptance Test Data Report	Within 72 hours of the completion of testing
Calorimetry Report	Within 21 days of the completion of testing
One orbit data	Weekly
Status Report	Every One Thousandth Orbit
Cell Failure Notification	Within 48 hours of such a failure
Corrective Action Plan	Within 72 hours of the failure
Final Report	Within 21 days of the completion of testing

PERFORMANCE STANDARDS:
Schedule: On-time delivery of the above
Technical: ATR's acceptance of the above

FINAL DELIVERY DESTINATION (NAME, BLDG, ROOM):
Gopal Rao, building 20, room 166